



## Carbon monoxide poisoning after an ice storm in Kentucky, 2009

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### Abstract:

**OBJECTIVES:** Carbon monoxide (CO) poisoning is a leading cause of morbidity and mortality during natural disasters. On January 26-27, 2009, a severe ice storm occurred in Kentucky, causing widespread, extended power outages and disrupting transportation and communications. After the storm, CO poisonings were reported throughout the state. The objectives of this investigation were to determine the extent of the problem, identify sources of CO poisoning, characterize cases, make recommendations to reduce morbidity and mortality, and develop prevention strategies. **METHODS:** We obtained data from the Kentucky Regional Poison Center (KRPC), hyperbaric oxygen treatment (HBOT) facilities, and coroners. Additionally, the Kentucky Department for Public Health provided statewide emergency department (ED) and hospitalization data. **RESULTS:** During the two weeks after the storm, KRPC identified 144 cases of CO poisoning; exposure sources included kerosene heaters, generators, and propane heaters. Hospitals reported 202 ED visits and 26 admissions. Twenty-eight people received HBOT. Ten deaths were attributed to CO poisoning, eight of which were related to inappropriate generator location. Higher rates of CO poisoning were reported in areas with the most ice accumulation. **CONCLUSIONS:** Although CO poisonings are preventable, they continue to occur in postdisaster situations. Recommendations include encouraging use of CO alarms, exploring use of engineering controls on generators to decrease CO exposure, providing specific information regarding safe use and placement of CO-producing devices, and using multiple communication methods to reach people without electricity.

**Source:** <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3072909>

### Resource Description

#### Communication:

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

#### Communication Audience:

audience to whom the resource is directed

Policymaker, Public

#### Exposure :

# Climate Change and Human Health Literature Portal

weather or climate related pathway by which climate change affects health

Extreme Weather Event, Temperature

**Extreme Weather Event:** Other Extreme Event

**Extreme Weather Event (other):** Ice storm

**Temperature:** Extreme Cold

**Geographic Feature:** ☐

resource focuses on specific type of geography

None or Unspecified

**Geographic Location:** ☐

resource focuses on specific location

United States

**Health Impact:** ☐

specification of health effect or disease related to climate change exposure

Injury

**Intervention:** ☐

strategy to prepare for or reduce the impact of climate change on health

A focus of content

**Medical Community Engagement:** ☐

resource focus on how the medical community discusses or acts to address health impacts of climate change

A focus of content

**Mitigation/Adaptation:** ☐

mitigation or adaptation strategy is a focus of resource

Adaptation

**Population of Concern:** A focus of content

**Population of Concern:** ☐

populations at particular risk or vulnerability to climate change impacts

Children, Elderly, Racial/Ethnic Subgroup

**Other Racial/Ethnic Subgroup:** Minority groups

**Resource Type:** ☐

format or standard characteristic of resource

Research Article

**Timescale:** ☒

time period studied

Time Scale Unspecified

**Vulnerability/Impact Assessment:** ☒

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content